포스터발표 초록

I. 진균병학(병원성)

A-01. Occurrence of Jujube (*Zizyphus jujube*) Fruit Rot by *Phytophthora nicotianae* and *P. palmivora*. Yang Sook Lim, Ki Chae Jung, Seun Han Kim and Jae Tak Yoon. Kyong Buk Agricultural Technology Administration. 200 Dongho Dong, Taegu, Korea 702-320.

In 1997 and 1998, a sever fruit rot of jujube caused by *Phytophthora* sp. has occurred at Kyungsan, Youngchean, and Kunyui regions in Taegu-Kyungbuk areas in Korea. Symptoms showed brownish to reddish rot on fruit resulting in early drop, blight and mummification. Blight symptoms of leaf stalk and shoot were developed by the pathogen. Two species of *Phytophthora* were isolated from infected fruit. Among 18 isolates of collected, 6 were identified as *P. nicotianae* and 13 as *P. palmivora* based on their mycological characteristics. *P. nicotianae* produced markedly papillate, not caducous and ovoid to spherical sporangia, abundant chlamydospores, heterothallic and A1 mating type. *P. palmivora* produced markedly papillate, caducous and ellipsoid to broadly ovoid, spherical sporangia, abundant chlamydospores, heterothallic and A1 mating type. Both fungi showed similarly strong pathogenicity to jujube and pear. However apple were not infected by the two species. This is the report of jujube rot caused by *P. nicotianae* and *P. palmivora* in Korea.

A-02. *Botryosphaeria* sp. Associated with Witches'-brooms on the Evergreen Chinkapin (*Castanopsis cuspidata* var. *sieboldii*) in Cheju Island. Jae-Wook Hyun and Kwang-Sik Kim. Cheju Citrus Research Institute, RDA, 1318, Harye, Namwonup, Namcheju, Cheju-Do, Korea 699-800.

It was known that the genus *Botryosphaeria*, while typically a dieback and canker causing pathogen on a wide range of fruit trees, also causes white rot of apple, ring spot of pear and Dothiorella rot of citrus and associated with witches'-brooms on the forest tree *Sophora chrysophylla* in Hawaii. We discovered that the genus associated with witches'-brooms on the Evergreen Chinkapin in Cheju island. The most prominent witches'-brooms's symptom is composed of abnormally proliferating branch, yellowish leaves, upright twigs with lengthened internodes and suppressed lateral buds. Affected tissue sometimes died, leaving trees with dead broomed branches. We observed fungus but phytoplasma-like organisms in these broomed tissues by electron microscope. The *Botryosphaeria* sp. isolated from the broomed tissue caused citrus rot similiar to Dothiorella rot by inoculation. The Evergreen Chinkapin which is one of the most typical evergreen tree and much being used in roadside tree in Cheju island is severly being damaged by the witches'-brooms. Therefore, we think that there should be adequate countermeasure.

A-03. Pitch Canker Disease of *Pinus rigida* in Korea. Jong Kyu Lee[1], Sang-Hyun Lee[2] and Sung-Il Yang[2]. [1]Dept. of Forest Resources Protection, Kangwon National University, Chunchon, 200-701, Korea. [2]Dept. of Forest Biology, Forest Research Institute, Seoul, 130-012, Korea.

In the mid 1990s, pitch pine (*Pinus rigida*) showing symptoms and signs, such as changes of needles into yellow then red, noticeable dieback in the tree crown, resin flows from the infected areas on the shoots, branches, cones, and trunk, resin-soaked wood under the bark, sporodochia in needle scars on shoots, and tree mortality was noticed in the natural and planted areas of *P. rigida* in Seoul, Incheon, Kyunggi-Do, and Chungcheong-Do. Disease survey and sampling of the infected branches with cone were carried out. Microscopic observations of the isolated fungus showed characteristic microconidia, macroconidia, and polyphialides, but did not produce chlamydospores. The fungus failed to grow below 10°C. Based on these morphological and physiological characteristics, the causal fungus was identified as *Fusarium subglutinans* f. sp. *pini*. Since the branches bearing cones were more likely to develop symptoms than branches without cones, seeds were removed from the cones and screened for detecting the infection of pathogen by placing on a *Fusarium* selective medium. Also, pathogenicity was tested by inoculating the isolated fungus on several pine seedlings (*P. densiflora, P. thunbergii*, and *P. koraiensis*), including *P. rigida* in the glasshouse. Now, epidemiological studies including the association of pine-feeding insects with disease development, and the assessment of genetic diversity of pitch canker fungus in Korea by vegetative compatibility and RFLPs in mitochondrial DNA are being conducted.

A-04. Pathogenicity and Morphological Characteristics of *Colletotrichum* spp. Isolated from Strawberry. Seung-Han Kim, Ki-Chae Jung, Yang-Sook Leem, Jae-Tak Yoon and Bu-Sool Choi, Kyongbuk provincial A.T.A, Taegu, Korea, 702-320.

The strawberry plants infected by *Colletotrichum* spp. was collected from Goryung, Chungdo and Gyungjoo, the major cultivation area of strawberry in Kyongbuk province, and pathogenesity and morphological characteristics of the isolates obtained from diseased plants was researched and the results are as following. G type which produces ascigerous state and dark gray aerial hyphae and F type which produces perithecia and irregular gray aerial hyphae was isloated. The conidial shape of isolates was cylindrical with one end pointed and size of G type was 15.4 ~ 20.5×4.6 ~ 5.4㎛ and F type was 14.1 ~ 23.0×5.1 ~ 6.4.㎛ Appressorial shape was similar with each other but it's size of F type is lager than G type. Pathogenesity by artificial inoculation showed that F type caused severe symptom on leaf, petiole and runner but G type caused severe symptom only on runner. Isolatied number of F type in each area was 8 of 14 isolates in Goryung, 36 of 37 in Gyungjoo and 15 of 16 in Chungdo.

A-05. Gray Blight of Tea Plant (*Camellia sinensis*) Caused by *Pestalotiopsis theae*. Gil-Ho Shin[1], Hyoung Koog Choi[1] and Young Jin Koh[2]. [1]Tea Experiment Station, Chonnam Agricultural Research & Extension Services, Posong 546-800, Korea. [2]Faculty of Applied Biology and Horticulture, Sunchon National University, Sunchon 540-742, Korea.

Morphological characteristics of gray blight showed a typical symptom of blight disease on leaves and shoots with white mycelia. Conidia are fusiform, straight, rarely curved and 5 cells with 3 median cells

equally dark and olivaceous. Conidia also have 3 apical appendages, rarely 2 or 4. Diseased symptoms were found on Yabukita leaves earlier than on local variety after artificial inoculation. Smaller symptoms were also found on the leaves of native variety. Distribution rates of *P. theae, P. longiseta,* and *Pestalotiopsis* species showed that *P. longiseta* was dominant in Kangjin area but *P. theae* was dominant in Posong, Heanam and cheju area. *Glomella cingulata* was also isolated in the same diseased leaves at all area surveyed.

A-06. Survey of Disease Occurrence and Control of Gray Blight of Tea Plant. Gil-Ho Shin[1], Jae-Seoun Hur[2] and Young Jin Koh[3]. [1]Tea Experiment Station, Chonnam Agricultural Research & Extension Services, Posong 546-800, Korea. [2]Dept. of Environmental Education, Sunchon National University, Sunchon 540-742, Korea. [3]Faculty of Applied Biology and Horticulture, Sunchon National University.

Field survey of the disease occurrence showed that a higher disease incidence of gray blight on tea(*Camellia sinensis*) leaves was found in Posong area where a native variety of tea has been cultivated than that in Kangjin area, where susceptible Japanese variety, Yabukita, has been cultivated. Gray blight disease was more severe in 1998 than that in 1997 in both areas. The highest disease incidence was recorded at the third harvest period which high temperature and humidity prevailed. In field test, applications of fluazinam, bitertanol, azoxystrobin, chlorothalonil, difenoconazole, mancozeb and copper hydroxide showed more than 80% of control performance against gray blight disease on tea leaves. Control values of bitertanol applied 3 days after plucking at the level of 250ppm were 87 to 91%, but was getting lower at 7 days or 10 days after plucking. The value of chlorothalonil immediately applied after plucking at the level of 1,253ppm was up to 90%, but the applications at the later days were found to be less effective. Minimum inhibitory concentrations (MIC) of thiophanate methyl or chlorothalonil against 45 isolates collected from different locations showed that the pathogens were found to be highly resistant to thiophanate methyl and cholrothalonil. Especially, MIC over 100 $\mu g/m\ell$ of thiophanate methyl was detected in more than 80% of the pathogens screened. However, fluazinam, bitertanol and copper hydroxide were still effective in controling the disease at low concentrations.

A-07. Characterization of *Colletotrichum gloeosporioides* Isolates from Hot Pepper with Molecular Analysis and Pathogenicity Tests. Sun-Sub Hwang[1], Myoung Yong Shim[2], Sang Ho Park[3] and Chang Won Choi[1]. [1]Department of Biology, Pai Chai University, Taejon, Korea 302-735, [2]Chungnam Agricultural Research & Extension Services, Taejon, Korea 305-313, [3]Korea Research Institute of Bioscience and Biotechnology, Taejon, Korea 305-600.

Thirty seven isolates of *Colletotrichum gloeosporioides* from red pepper were compared by various molecular methods and a pathogenicity assay in order to determine the genetic diversity and host specificity among the populations. Arbitrarily primed-PCR amplification with four different primers derived from minisatellite or repeat sequences, produced uniform banding patterns for all the collected isolates from different geographic locations in Korea. *Hae*III digestion patterns of A+T-rich DNA analysis grouped the *C. gloeosporioides* isolates among the population. Artificially inoculated green and red pepper with thirty seven isolates, respectively, showed typical anthrancnose lesions, but a significant difference was shown in sizes of lesions. Also artificial inoculation was made on bell pepper and egg plants.

A-08. Pathogenicity and Phytotoxin Production of *Nigrospora sphaerica* from Zoysiagrass (*Zoysia japonica*). Gyung Ja Choi, Jin-Cheol Kim, Mi Jeong Shon, Heung Tae Kim and Kwang Yun Cho. Agrochemicals Screening Division, Korea Research Institute of Chemical Technology, Taejon 303-606, Korea.

A causal fungus of turfgrass blight was isolated from the infected leaves of zoysiagrass (*Zoysia japonica* Steud.) and classified as *Nigrospora sphaerica* Sacc. by using a light microscope. Its conidia are large (14-20 ㎛ diameter), shiny, black, aseptate, and smooth-walled spheres. The fungus caused typical blighting symptoms on the two turfgrass plants of bermudagrass (*Cynodon dactylon* (L.) Pers.) and bentgrass (*Agrostis palustris* Huds.). It was found to produce a phytotoxic substance to be associated with the pathogenic mechanism. A phytotoxin was isolated from the liquid cultures of *N. sphaerica* by repeated silica gel chromatography and its structure was determined to be 5,6-dihydro-5-hydroxy-6-propenyl-2*H*-pyr-2-one. It was not a host-specific toxin showing phytotoxic effects to various plants including turfgrasses in the leaf-wounding assay and the whole plant test. The compound caused leaftip dieback symptoms in turfgrass plants similar to those caused by the pathogen. Thus, the pyrone metabolite are thought to be involved in the development of Nigrospora blight.

A-09. Taxonomic Studies on *Alternaria* in Korea (I). Jeaong Hwan Kim, Byung Ryun Kim and Seung Hun Yu. Department of Agricultural Biology, College of Agriculture, Chungnam National University Taejon 305-764, Korea.

The taxonomy of the genus *Alternaria* has been a subject of controversy for many years. There is the urgent need to create the taxonomic system which would allow the correct identification of each isolate. The published Korean literature on this genus is scattered and fragmentary and pertains to a few individual species with special emphasis on pathology, physiology and control. It was, therefore, considered desirable to undertake a consolidated compilation on this important genus featuring detailed diagnostic descriptions, specific characterization and taxonomic discussions with complete illustrations of the species of *Alternaria* found in Korea. This is the first of the series of detailed and consolidated account of the Korean species of the genus *Alternaria*. The present study circumscribes 7 species ; viz. *Alternaria alternata, A. tenussima, A. longipes, A. brassicae, A. brassicicola, A. japonica* and *A. panax*.

A-10. Effect of Water Activity and Temperature on *in situ* Growth of *Aspergillus ochraceus* and Its Related Fungi, Ochratoxin A Formation on Maize Grain. Hyang Burm Lee, Naresh Magan[1], Chang Jin Kim and Seung Hun Yu[2]. Korea Research Institute of Bioscience and Biotechnology, Taejon 305-333, Korea, [1]Cranfield Biotechnology Centre, Cranfield University, Cranfield, U.K, Taejon 305-333, Korea, [2]Division of Applied Biology, Chemistry and Food Biotechnology, Chungnam National University, Taejon 305-764, Korea.

The effect of different water activities (aw, 0.995 and 0.95) and temperatures (18℃ and 30℃) on mycelial growth of *Alternaria alternata, Aspergillus ochraceus, A. candidus, A. flavus, A. niger* and *Eurrotium amstelodami*, and formation of ochratoxin A on sterile layers of maize by *A. ochraceus* in single and paired cultures were determined over periods of two weeks. The quantitative analysis of ochratoxin A was determined by competitive enzyme linked immunosorbent assay (competitive ELISA). *In*

situ growth rates of each species on maize grain varied considerably with water activity and temperature. At 30℃, the growth rate of *A. flavus*, *A. niger*, *A. ochraceus* and *E. amstelodami* were higher at 0.95 aw than 0.995 aw . The production of ochratoxin A was higher at 0.95 aw than 0.995 aw. The mean yield of ochratoxin A at 0.95 aw and 0.995 aw showed 1007.5 ug/g and 765.0 ug/g, respectively. On the other hand, at 18 oC, the growth of a xerophilic *E. amstelodami* was fastest at 0.95 aw and both temperatures, and the growth rate of *A. alternata*, *A. flavus* and *A. ochraceus* were higher at 0.995 aw than 0.95 aw. The production of ochratoxin A was higher at 0.995 aw than 0.95 aw. The mean yield of ochratoxin A at 0.95 and 0.995 aw was showed 40.6 ug/g and 70.3 ug/g, respectively. *In situ* production of ochratoxin A by *A. ochraceus* when paired with other interacting fungi varied for aw, temperature and interacting species. At 30℃, ochratoxin formation was significantly reduced when paired with *A. flavus, A. niger* and *E. amstelodami* at 0.95 aw, but was some enhanced by *A. alternata* and *A. candidus*. At 18℃, the formation of ochratoxin A was significantly reduced especially by *A. niger* at 0.995 aw.

A-11. Molecular Phylogenic Analysis of Genetic Variation in *Fusarium oxysporum* f. sp. *lycopersici* Causing Vascular Wilt of Tomato (*Lycopersicon esculentum*). Young Tae Kim and Hong Gi Kim[1].

[1]Department of Agricultural Biology, Chungnam National University, Taejon 305-764, Korea.

Isolates of *Fusarium oxysporum* f. sp. *lycopersici* from Korea, Japan and U.S.A. were examined for genetic variation and molecular phylogeny by using methods, analysis of vegetative compatibility group (VCG), restriction fragment length polymorphism (RFLP) analysis of total genomic DNA, restriction fragment analysis of PCR-amplified ribosomal intergenic spacers (IGS) and electrophoretic karyotyping analysis. The IGS haplotype of ribosomal DNA correlated with VCG and showed differences between Korean and foreign isolates. RFLP band patterns of genomic DNAs were unique with the VCG and highly correlated with VCG in cluster analysis using the unweighted paired group method using averages (UPGMA) method. No correlation, however, was detected between RFLP group and race in this pathogen. Electrophoretic karyotype (EK) analysis by contour-clamped homogeneous electric field (CHEF) gel electrophoresis was applied to characterize chromosomal variation of *F. oxysporum* f. sp. *lycopersici*. Nine to eleven chromosome-sized DNA bands were resolved successfully and the total genome size was estimated to range from 35.29 to 43.87 Mb. Distinct differences of chromosomal DNA patterns exist between isolates from Korea and foreign countries. Close correlation was found among the groupings obtained by VCG, IGS haplotype and RFLP. Korean isolates belonged to similar or same groups of VCG, IGS haplotype, RFLP and EK, whereas foreign isolates showed variable polymorphic groups of each method. Few isolates from Japan have low similarity to Korean isolates in RFLP and chromosomal polymorphic group, but isolates form U.S.A. did not share the same VCG, RFLP and EK with Korean isolates. Taken together, it seems that Korean isolates are quite different from isolates of foreign countries, and that Korean isolates have their own phylogenic origin and genetic characteristics.

A-12. Characteristics of Fungal Community in Ricehull and Rockwool Media of Tomatoes. Choong Sik Lee[1], Eun Woo Park[1] and Choong Il Lee[2]. [1]Seoul National University, Suwon, Korea 441-744. [2]Research Institute of Industrial Science & Technology, Kwangyang, Korea 545-090.

Major characteristics of fungal communities in the bonded ricehull and rockwool media were investigated using the dilution plate method. The bonded ricehull medium can be considered an island with plenty of organic matter and being almost free of indigenous microorganisms before being used. Once planted and irrigated, various fungi have immigrated and colonized the medium. In this process, *P. ostracoderma* and *Penicillium* spp. were the first colonizers and the diversity of fungal community was low. *Acremoniella* sp. and *Trichoderma* spp. were first detected 15 days after transplanting and their population size remained high throughout the experiment. The population of *Fusarium* spp. and *Alternaria* spp. decreased after 15 days transplanting and were no longer detected from the last samples. The minor fungal species from the ricehull medium were *Curvularia* spp., *Cladosporium* spp., *Rhizopus* spp. and *Phoma* spp. Disturbance of fungal community with NaOCl resulted in decrease in diversity and subsequent recovery. Autoclaving also reduced diversity, but diversity remained low because of outcompetition by *P. ostracoderma* and *Penicillium* spp. for space on the surface of medium. In the case of rockwool medium, *Penicillium* spp. and *Fusarium* spp. were constantly isolated, and diversity of fungal community was relatively high at the early stage. Nutrients in the rockwool medium appeared to be a major factor affecting diversity.

A-13. A Simple Method Using Cotyledon of Cucumber Seedling for Screening of Resistance to *Cladosporium cucumerium*. [1]Eun Joo Choi, Kwang Seop Han, In Seok Oh, Kyu Heung Han and [2]Seung Hun Yu. [1]Chungnam Agricultural Reseach & Extention Services, Taejon 305-313, Korea. [2]Department of Agricultural Biology, Chungnam University, Taejon 305-764, Korea.

Scab of cucumber caused by *C. cucumerium* is a serious disease in Korea. Screening of resistance to the disease is usually done by spraying of spore suspension either on leaves of seedling or whole plant. The cotyledon screening method, that is dropping 6$\mu\ell$ of spore suspension on upper surface of cotyledon, has an advantage of using less time, space and effort than method using older plant. Optimum inoculum densities for differentiating resistant and susceptible plant were ranged from 10^4 to 10^6 spores/mℓ. Inoculation at 2 days after cotyledons expanded was better than 4 days to differentiate cultivar resistance. Twenty six cultivars of cucumber were evaluated for their resistance to the pathogen by the cotyledon screening method, and found that three cultivars, Changilbanback, Sunmi and Eunsung were moderate resistant to the disesse. The three cultivars also showed moderate resistant to the disesse greenhouse experiments.

A-14. Silver Scurf Caused by *Helminthosporium solani* Dur. & Mont. from Storaging Potatoes in Pyoungchang, Kangwon. Youngil Hahm, Kyoungyul Ryu, Jeomsoon Kim and Gwan Yong Shin. Potato Division, National Alpine Agriculture Experiment Station. RDA, Pyungchang, Kangwon 232-950 Korea.

Potato tuber with silver scurf lesions were collected between 1997 and 1998 from storage in Pyungchang Kangwon. Symptoms of this disease were confined to the stem end of affected tuber and severely infected tubers shrivel and shrink due to loss of moisture. The causal agent of silver scurf was identified as *Helminthosporium solani* by morphological and cultural characteristics. It has a hyaline mycelium that is septate. Conidiophores are unbrenched, and turn brown with age. Conidia are brown, arranged in whorls from the distal ends of the cells. Shape was straight, slightly curved, and have 2~7 septate. Size of conidia with taped tip was 7~11×24~85㎛. Optimal temperature for mycelial growth is 20~28℃. Potato silver scurf by *Helminthosporium solani* was the first report in Korea.

A-15. Occurrence of Postharvest Diseases of Pear. Young-Seob Park[1]. Wan-gyu Kim[2]. Young-ki Kim[2]. Chang-hun Song[1] and Ki-youl Kim[1]. [1]National Naju pear Research Institute, 1034 Keumcheon Myeon, Naju, Korea 523-820, [2]National Institute of Agricultural Science and Technology, RDA, Suwon, Korea 305-600.

The Incidence of Postharvest disease of pear was Surveyed 5.7% in Naju area from 1997 to 1998, Eight genera including Black rot (*Botryosphaeria dothidea*), Fusarium fruit rot (Fusarium spp.) and others were isolated from the decayed pear fruits. Isolation rates of fungi were *Botryosphaeria dothidea* 20%, *Fusarium* spp. 8%, *Cladosporium* sp. 4%, *Collectotricum* sp. 8%, Phomopsis sp. 8%, *Alternaria* sp. 8%, *Botrytis cinerea* 16%, *Penicillium* sp. 16% and the unknown 12%, respectively. The unknown was't isolation fungi. Pathogenicity test by colony PDA at room temperature(20℃±5) revealed the isolated fungi caused the same symptoms as observed in the storage room from 10 to 21 after inoculation.

A-16. Identification of Pathogenic Fungi Associated with Storage Rots of Sweet Potato. Hyeong-kwon Shim, Yong-Hoon Lee and Du-Ku Lee. National Honam Agricultural Experiment Station, RDA, Iksan, Chonbuk, Korea 570-080.

Storage roots of sweet potato collected from the Mokpo experiment station, RDA, were investigated for their rots during storage. Isolated fungi were tested for their pathogenicity by artificial inoculation and characteristics was recorded. The incidence of storage rots in March, 1998, ranged from 5.1 to 39.0%. *Rhizopus stolonifer, Fusarium oxysporum, Penicillium* sp., *F. solani, Mucor* sp., *Phomopsis* sp., *Plenodomus destruens, Trichoderma* sp. *Sclerotium rofsii* (symptom was observed during storage, but isolated from the field) and *Pestalotiopsis neglecta* were isolated, and they were all virulent. *R. stolonifer, Mucor* sp., *Penicillium* sp., *F. oxysporum, F. solani,* were more frequently isolated than the other fungi. Symptoms were characterized by that *R. stolonifer* and *Mucor* sp. was responsible for soft rot, *Phomopsis* sp. for dry rot, *Penicillium* sp. for blue mold rot, *S. rofsii* for circular spot, *F. oxysporum* and *F. solani* for fusarium root rot.

A-17. Gray Leaf Spot of Tomatoes Caused by *Stemphylium solani*, the First Report in Korea. Byung-Soo Kim, Hyun-Jung Cho, Hee-Suk Hwang and Yu-Sun Cha. Kyungpook National University, 1370 Sankyuk Dong, Taegu, Korea 702-701.

Gray leaf was observed on a few tomato plants growing in a pepper field in Chungsong, Kyungpook province in 1997. Pepper plants around the tomato plants were badly infected with gray leaf spot. Both Stemphylium solani and S. lycopersici were found on the lesions when observed under dissecting microscope. Pure isolates of both species were highly pathogenic on pepper and tomatoes. Numerous characteristic tiny spots appeared within 5 days when spore suspensions were sprayed, incubated for 48 hrs in dark and left in the greenhouse bench. Mycelia were hyaline and septate. Conidiophores arose from vegetative mycelia in a lightly twisting mode and were light brown with 6-9 septae, average 150.1 x 4.6㎛ in dimension. Conidia were formed on the terminal vesicular tip of the conidiophores. Conidia were light brown to brown depending on the age. Usually 4 transverse septae and 1 to 3 longitudinal septae were observed. Dimension was 30.1～51.6 x 15.0～21.5㎛ in range with average of 43.2 x 18.2㎛. l/b ratio was 2.37. These characteristics conformed S. solani. Gray leaf spot of tomato caused by S. solani and S. lycoersici was first reported by Weber in 1930 and by Hannon and Weber in 1955, repectively, in U. S. A. Occurrence of leaf spot caused by S. lycopersici in Korea was reported by Min et al. in 1995. It is the first report of occurrence of gray leaf spot of tomatoes caused by S. solani in a natural field in korea.

A-18. Zonate Leaf Spot of Sorghum Caused by *Gloeocercospora sorghi* in Korea. Chul Heo, Jung-Nyo Kim, Ik-Hwa Hyun and Noh-Youl Heo. Overseas Pest Division, National Institute of Agricultural Science and Technology, RDA, Suwon, Korea 441-706.

Gloeocercospora sorghi caused zonate leaf spots on grain sorghum (*Sorghum bicolor* Moench) in fields in Yongwol and in Sosan, Korea. The zonate spots were conspicuous on sorghum leaves as circular, reddish purple bands alternating with tan or straw-colored areas, which formed a coarsely zonate pattern. The lesions often occurred in semicircular patterns along the margin of leaves. The fruiting bodies of the fungus were sporodochia, which were formed on the surface of leaves in a moist chamber. The conidia, borne in a pinkish to salmon-colored slimy matrix, were hyaline, elongate-filiform, straight or slightly curved, 3-to 17-septate, and of variable length (28-197×1.6-3.4㎛). *G. sorghi* isolated from diseased leaves of sorghum caused characteristic reddish-brown water-soaked leaf spots when inoculated to seedlings.